

SONY®

3-985-058-11 (1)

Trinitron® Color Video Monitor

SECTION 1 OPERATING INSTRUCTIONS

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PVM-8045Q

Trinitron

**PVM-8042Q
PVM-8040**

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This section is extracted
from operating instructions.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

Dangerously high voltages are present inside the unit. Do not open the cabinet. Refer servicing to qualified personnel only.

THIS APPARATUS MUST BE EARTHED



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

For the customers in the USA

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

In the event of a malfunction or when maintenance is necessary, consult an authorized Sony dealer.

Ensure that your equipment is connected correctly. If you are in any doubt consult a qualified electrician.

CAUTION:

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Precautions

On safety

- **PVM-8045Q/8042Q:** Operate the unit on 120 V AC or 12 V DC. For the AC operation, use only the supplied AC power cord or the AC power adaptor recommended (not supplied). Do not use any other type. For the battery operation, use only the NP-1B battery pack and BP-L60A/L90A with DC-L10 (not supplied). Do not use any other batteries.
- **PVM-8040:** Operate the unit only on 120 V AC. Use only the supplied AC power cord. Do not use any other type.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it further.
- Unplug the unit from the wall outlet if it is not to be used for several days.
- To disconnect the AC power cord, pull it out by the plug. Never pull the cord itself.

On installation

- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the unit near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Keep the unit away from a loudspeaker or motor, as the picture may be affected.

On cleaning

Clean the unit with a slightly dampened soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzene as they might damage the finish of the cabinet. As a safety precaution, unplug the unit before cleaning it.

On repacking

Retain the original carton and packing materials for safe transport of this unit in the future.

If you have any questions about this unit, contact your authorized Sony dealer.

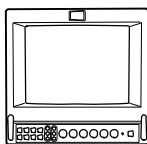
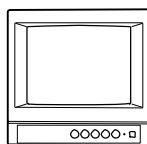
ATTENTION – When the product is installed in a rack:

- Elevated operating ambient temperature**
If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature of 0 to +35°C (32 to 95°F) (Tmra).
- Reduced air flow**
Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- Mechanical loading**
Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- Circuit overloading**
Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- Reliable earthing**
Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).
- Gap keeping**
The upper and lower gaps of rack-mounted equipment should be least 44 mm (1 3/4 inches).

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This instruction manual covers the PVM-8045Q, PVM-8042Q and PVM-8040. The differences among the models are clearly described in the text.

PVM-8045Q/8042Q**PVM-8040**

Features

Four color systems available**(PVM-8045Q/8042Q only)**

The monitor can display NTSC, PAL, SECAM and NTSC4.43¹⁾ signals. The appropriate color system is selected automatically.

HR (High Resolution) Trinitron^{®2)} picture tube (PVM-8045Q)

The HR Trinitron picture tube (0.25 mm aperture grill pitch) provides a high resolution picture. Horizontal resolution is more than 450 TV lines at the center of the picture.

Trinitron picture tube (PVM-8042Q/8040)

The Trinitron picture tube (0.5mm aperture grill pitch) provides a high resolution picture. Horizontal resolution is more than 250 TV lines at the center of the picture.

Beam current feedback circuit

The built-in beam current feedback circuit assures stable white balance.

Comb filter

When NTSC video signals are received, a comb filter activates to increase the resolution, resulting fine picture detail without color spill or color noise.

Multiple input signals (PVM-8045Q/8042Q only)

In addition to the composite video signals and the Y/C signals, analog RGB signals and component signals can be input.

External sync input (PVM-8045Q/8042Q only)

When the EXT SYNC button is pressed, the monitor can be operated on the sync signal fed through an external sync connector.

Blue only picture (PVM-8045Q/8042Q only)

Black and white apparent picture consisting from only the blue signal will be displayed. This facilitates the “chroma” and “phase” adjustment, and the observation of the video noise.

16:9 selector (PVM-8045Q/8042Q only)

The monitor can display the 16:9 signal with the correct ratio of width and height, compressing the picture vertically.

Under scan mode (PVM-8045Q/8042Q only)

The monitor can display signals that are scanned outside the normal screen so you can monitor the whole image.

Audio circuit and built-in speaker

A speaker (0.5 W, monaural) is built into the monitor for sound monitoring.

Automatic/Manual DEGAUSS

The screen is automatically demagnetized when the monitor is turned on. Manual degauss is also available for PVM-8045Q/8042Q by pressing the DEGAUSS button.

Automatic termination

(only connectors marked $\sim \wedge \sim$)

The Y/C, VIDEO IN and EXT SYNC IN connectors are terminated at 75 ohms inside, when no cable is connected to the loop-through output connectors. When a cable is connected to an output connector, the 75-ohm termination is automatically released.

EIA standard 19-inch rack mounting

By using an MB-507 mounting bracket (not supplied), the monitor can be mounted in an EIA standard 19-inch rack. For details on mounting, see the instruction manual of the MB-507.

Varied power sources

In addition to AC power, you can use battery pack or external DC 12 V power. The monitor can operate with one or two Sony NP-1B* battery packs. If you use the DC-L10* battery adaptor, the monitor can operate with a Sony BP-L60A/L90A* lithium ion battery pack.

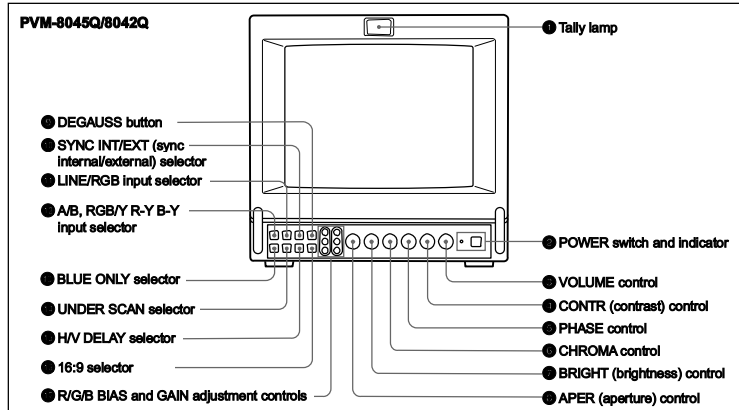
* The NP-1B battery pack, DC-L10 battery adaptor and BP-L60A/L90A battery pack are not supplied.

1) An NTSC 4.43 signal is used for playing back NTSC-recorded video cassettes with a video tape recorder/player especially designed for use with this system.

2) Trinitron is a trademark of Sony Corporation.

Location and Function of Parts and Controls

Front



① Tally lamp

This indicator lights up. The tally control connection is needed.

For the pin assignment, see "Specifications" on page 12 (US).

② POWER switch and indicator

Depress to turn the monitor on. The indicator will light up in green.

The POWER indicator also functions as the battery indicator. When the internal battery becomes weak or the power supplied through the DC 12 V IN jack decreases, the indicator flashes.

③ VOLUME control

Turn this control clockwise or counterclockwise to obtain the desired volume.

④ CONTR (contrast) control

Turn clockwise to make the contrast stronger and counterclockwise to make it weaker.

⑤ PHASE control

This control is effective only for the NTSC and NTSC4.43 color systems. Turn clockwise to make the skin tones greenish and counterclockwise to make them purplish.

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⑥ CHROMA control

Turn clockwise to make the colour intensity stronger and counterclockwise to make it weaker.

⑦ BRIGHT (brightness) control

Turn clockwise for more brightness and counterclockwise for less.

⑧ APER (aperture) control

Turn clockwise for more sharpness and counterclockwise for less.

Notes

- The PHASE, CHROMA and APER control settings have no effect on an analog RGB signal.
- The PHASE control has no effect on component signals.
- The PHASE control setting is effective only for the NTSC system.

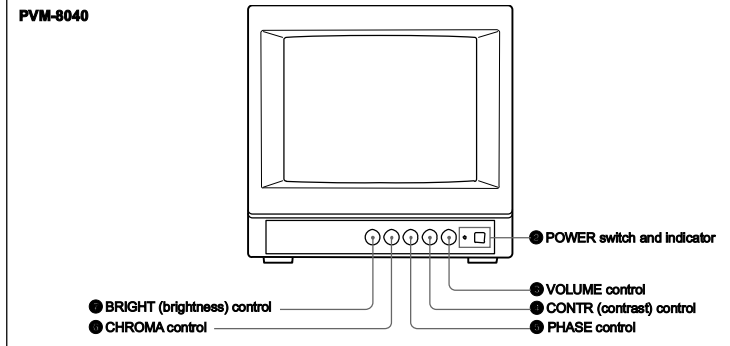
⑨ DEGAUSS button

Press this button momentarily. The screen will be demagnetized.

Note

If you press the DEGAUSS button again too soon, the color shades may be uneven.

PVM-8040



① SYNC INT/EXT (sync internal/external) selector
Keep this button released (INT) to operate the monitor on the sync signal from the displayed composite video signal.

Depress this button (EXT) to operate the monitor on an external sync signal fed through the EXT SYNC connector on the rear panel.

② LINE/RGB input selector

Select the programme to be monitored. Keep this button released (LINE) for a signal fed through the LINE A or LINE B connectors. Depress this button (RGB) for a signal fed through the RGB connectors.

③ A/B, RGB/Y R-Y B-Y input selector

When the LINE/RGB input selector is set to LINE, keep this button released (A) for a signal fed through the LINE A connectors. Press this button (B) to monitor the signals from the LINE B connector.

When the LINE/RGB input selector is set to RGB, select the RGB signal or the component signal which is fed through the RGB input connectors. Keep this button released (RGB) for the RGB signal. Press this button (Y R-Y B-Y) to monitor the component signals.

④ BLUE ONLY selector

Depress this button to turn off the red and green signals. A blue signal is displayed as an apparent monochrome picture on the screen. This facilitates "chroma" and "phase" control adjustments and the observation of video noise.

Note

The PHASE control adjustments is effective only for the NTSC system.

⑤ UNDER SCAN selector

Depress this button for underscanning. The display size is reduced by approximately 3% so that four corners of the picture are visible.

⑥ H/V DELAY selector

Depress this button to observe the horizontal and vertical sync signals at the same time. The horizontal sync signal is displayed in the left quarter of the screen; the vertical sync signal is displayed near the center of the screen.

⑦ 16:9 selector

Press this selector to monitor the signals of 16:9 picture.

Pressing the UNDER SCAN selector ⑤ in 16:9 mode displays the whole 16:9 picture up to the four corners.

⑧ R/G/B BIAS and GAIN adjustment controls

Used for white balance fine adjustment.

BIAS and GAIN controls are provided for the R (red), G (green) and B (blue) screens.

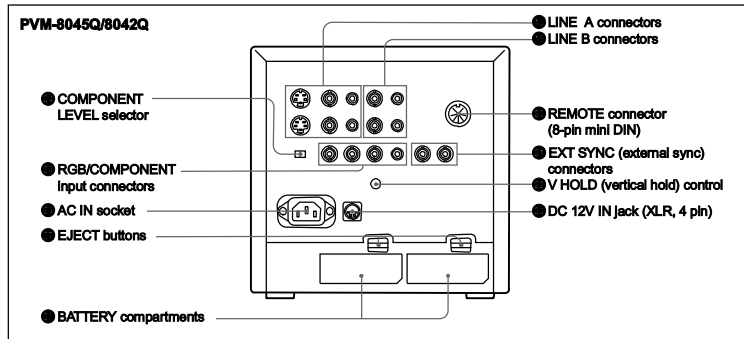
BIAS: Adjust the white balance and brightness of the screen at the lowlight.

GAIN: Adjust the white balance and brightness of the screen at the highlight.

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Location and Function of Parts and Controls

Rear



① LINE A connectors (PVM-8045Q/8042Q)

② LINE connectors (PVM-8040)

Y/C IN (4-pin mini DIN): Connect to the Y/C separate output of a video camera, VCR or other video equipment.

Y/C OUT (4-pin mini DIN): Loop-through output of the Y/C IN connector. Connect to the Y/C separate input of a VCR or another monitor.

VIDEO IN (BNC): Connect to the video output of a video camera, VCR or other video equipment.

VIDEO OUT (BNC): Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.

AUDIO IN (phone jack): Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).

AUDIO OUT (phone jack): Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

Note

The Y/C IN connector has a priority over the VIDEO IN connector. When a plug is connected to the Y/C IN connector, the VIDEO IN connector is automatically disconnected.

Note

(PVM-8045Q/8042Q only)

To monitor the signal fed through these connectors, keep the LINE/RGB selector and the A/B, RGB/Y R-Y B-Y selector on the front panel released (LINE and A).

③ LINE B connectors

To monitor the signal fed through these connectors, keep the LINE/RGB selector released (LINE) and depress the A/B, RGB/Y R-Y B-Y selector on the front panel (B).

VIDEO IN (BNC): Connect to the video output of a video camera, VCR or other video equipment.

VIDEO OUT (BNC): Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.

AUDIO IN (phone jack): Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).

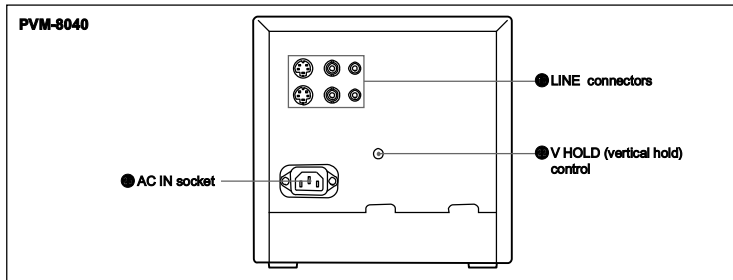
AUDIO OUT (phone jack): Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

④ REMOTE connector (8-pin mini DIN)

Connect to the tally output of a control console, special-effect generator, etc. The tally lamp on the front panel will be turned on and off by the connected equipment. This connector can be used for connecting a remote controller.

For the pin assignment of this connector, see "Specifications" on page 12 (US).

PVM-8040



⑤ EXT SYNC (external sync) connectors

IN (BNC): When this monitor operates on an external sync signal, connect the reference signal from a sync generator to this connector. In this case, depress the SYNC INT/EXT selector on the front panel (EXT).

OUT (BNC): Loop-through output of the EXT SYNC IN connector. Connect to the external sync input of video equipment to be synchronized with this monitor.

⑥ V HOLD (vertical hold) control

Turn to stabilize the picture if it rolls vertically.

⑦ DC 12V IN jack (XLR, 4 pin)

Connect the Sony battery adaptor DC-L10 (not supplied).

⑧ COMPONENT LEVEL selector

Select the component level from among two modes.
N10/SMPTE: for 100/0/100/0 signal
BETA 0: for 100/0/75/0 signal

⑨ RGB/COMPONENT input connectors

R/R-Y, G/Y, B/B-Y (BNC), AUDIO (phone):

To monitor a signal fed through these connectors, depress the LINE/RGB selector on the front panel (RGB). When the SYNC INT/EXT selector on the front panel is released (INT), the monitor operates on the sync signal from the G/Y channel.

To monitor the analog RGB signal

Connect to the analog RGB signal outputs of a video camera. Keep the A/B, RGB/Y R-Y B-Y selector on the front panel released (RGB).

To monitor the component signal

Connect to the R-Y/Y/B-Y component signal outputs of a Sony BetaCam video camera. Depress the A/B, RGB/Y R-Y B-Y selector on the front panel (Y R-Y B-Y).

⑩ AC IN socket

Connect the supplied AC power cord to this socket and to a wall outlet.

⑪ EJECT buttons

Press the EJECT button upwards to remove the battery pack.

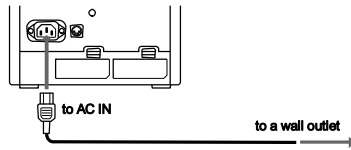
⑫ BATTERY compartments

Insert the NP-1B battery pack (not supplied).

Power Sources

House Current (for all models)

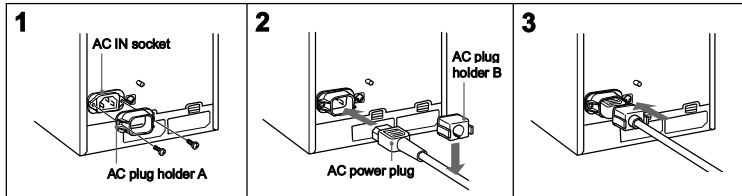
Connect the supplied AC power cord to the AC IN socket and to a wall outlet.



For the PVM-8045Q/8042Q

When the AC power cord is plugged into the AC IN socket, the battery pack (if installed) or the AC power adaptor (if connected) is automatically disconnected.

To connect an AC power cord securely with AC plug holders.



1 Remove the AC IN socket screws and then use them to attach the AC plug holder A (supplied) to the AC IN socket.

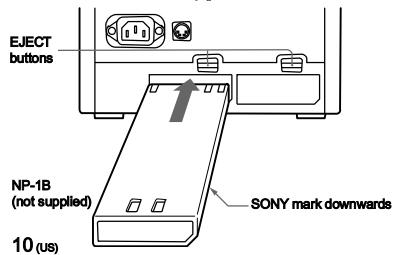
2 Plug the power cord to the AC IN socket. Then, attach the supplied AC plug holder B on top of the AC power cord.

3 Slide AC plug holder B over the cord until it locks.

To remove the AC power cord
Pull out AC plug holder B by squeezing the left and right sides.

Rechargeable Battery (PVM-8045Q/8042Q only)

The monitor can operate with one or two battery packs. For extended use, two battery packs are recommended.



To remove the battery pack, press the EJECT button upwards.

For charging, use the BC-1WD for the NP-1B.

Note

Make sure you disconnect the cables connected to the connectors (AC IN, DC 12 V IN) at the rear of the monitor. Otherwise, the monitor cannot operate on the battery pack(s).

Specifications

Video signal

Colour system	PVM-8045Q/8042Q: NTSC, PAL, SECAM, NTSC4.43 PVM-8040: NTSC
Resolution	PVM-8045Q: 450 TV lines PVM-8042Q/8040: 250 TV lines
Aperture correction	-4.0 dB to +6.0 dB (at 3.0 MHz)
Frequency response	6.0 MHz (-3.0 dB) at all inputs
Synchronization	AFC time constant 1.0 msec.

Picture performance

Normal scan	6% over scan of CRT effective screen area
Underscan	3% underscan of CRT effective screen area
H. linearity	Less than 5.0% (typical)
V. linearity	Less than 5.0% (typical)
Convergence	Central area: 0.43 mm (typical) Peripheral area: 0.53 mm (typical)
Raster size stability	H: 1.0%, V: 1.5%
High voltage regulation	3.0%
Color temperature	D65

Inputs and Outputs

Connector	Model	PVM-8045Q PVM-8042Q	PVM-8040
LINE A	Y/C IN	yes	yes
	Y/C OUT	yes	yes
	VIDEO IN	yes	yes
	VIDEO OUT	yes	yes
	AUDIO IN	yes	yes
	AUDIO OUT	yes	yes
LINE B	VIDEO IN	yes	no
	VIDEO OUT	yes	no
	AUDIO IN	yes	no
	AUDIO OUT	yes	no
RGB/ COMPONENT	R/R-Y IN	yes	no
	G/Y IN	yes	no
	B/B-Y IN	yes	no
	AUDIO IN	yes	no
EXT SYNC	IN	yes	no
	OUT	yes	no
REMOTE		yes	no

Inputs

Y/C IN: 4-pin mini DIN connector
See the pin assignment on page 12 (US).
VIDEO IN: BNC connector
1 Vp-p \pm 6 dB, sync negative
AUDIO IN: phono jack, -5 dBu^a, less than 47 kohms
R/R-Y, G/Y, B/B-Y: BNC connector
R, G, B channels: 0.7 Vp-p, \pm 6 dB Sync on green: 0.3 Vp-p, negative,
R-Y, Y, B-Y channels: 0.7 Vp-p, \pm 6 dB (Standard colour bar signal of 75% chrominance)
EXT SYNC IN: BNC connector
Composite sync 4 Vp-p, \pm 6 dB, negative

Loop-through outputs

Y/C OUT: 4-pin mini DIN connector, 75 ohms terminated (75 ohms automatic termination)
VIDEO OUT: BNC connector, 75 ohms terminated (75 ohms automatic termination)
AUDIO OUT: phono jack
EXT SYNC OUT: BNC connector, 75 ohms terminated
Output level 0.5 W
REMOTE: 8-pin mini DIN connector (75 ohms automatic termination)
See the pin assignment on page 12 (US).

Speaker output

Remote input

^a) 0 dBu = 0.775 V_{r.m.s.}

General

Power consumption & requirements

PVM-8045Q/8042Q:
0.6 A 45 W MAX at 120 V AC operation
3.7 A 38 W at 12 V DC operation
PVM-8040:
0.6 A 39 W MAX at 120 V AC operation

Operating conditions

Temperature	0 to +35°C (32 to 95°F)
Humidity	0 to 90% (no condensation)
Pressure	700 to 1060 hPa

Specifications

Transport and storage conditions
Temperature -10 to +40°C (14 to 104°F)
Humidity 0 to 90%
Pressure 700 to 1060 hPa
Dimensions Approx. 217 x 217 x 352.5 mm
(w/h/d) (8 5/8 x 8 5/8 x 14 inches)
not incl. projecting parts and
controls
Mass Approx. 8.2 kg (18 lb 1 oz) not
incl. battery packs
Accessory supplied AC power cord (1)
Cable with an 8-pin connector (1)
(PVM-8045Q/8042Q only)
AC plug holders (1 set)
Tally plate (1) (PVM-8045Q/
8042Q only)

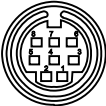
Design and specifications are subject to change
without notice.

Pin Assignment
Y/C IN connector (4-pin mini DIN)



Pin No.	Signal	Description
1	Y-input	1 Vp-p, sync negative, 75 ohms
2	CHROMA sub-carrier-input	286 mVp-p (NTSC), burst Delay time between Y and C: within 0 ±100 nsec., 75 ohms
3	GND for Y-input	GND
4	GND for CHROMA-input	GND

REMOTE connector (8-pin mini DIN)
(PVM-8045Q/8042Q only)



Pin No.	Signal
1	16:9
2	H/V delay
3	GND
4	EXT SYNC
5	Tally
6	Underscan
7	A/B or RGB/Y R-Y B-Y
8	LINE/RGB

Notes

- For remote control, connect the pin of the desired
function to pin 3 (GND).
- For remote control, set the front button to OFF (the
switch is out).

SONY®

3-885-058-21 (1)

Trinitron® Color Video Monitor

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Trinitron

PVM-9045QM**Trinitron****PVM-9042QM
PVM-9040ME**

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English

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

Dangerously high voltages are present inside the unit. Do not open the cabinet. Refer servicing to qualified personnel only.

In the event of a malfunction or when maintenance is necessary, consult an authorized Sony dealer.


THIS APPARATUS MUST BE EARTHED

For the customers in the UNITED KINGDOM

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow	: Earth
Blue	: Neutral
Brown	: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:
The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked with the letter E or by the safety earth symbol  or coloured green or green-and-yellow.
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Ensure that your equipment is connected correctly.
If you are in any doubt consult a qualified electrician.

CAUTION:

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Voor de klanten in Nederland



Bij dit produkt zijn batterijen geleverd.
Wanneer deze leeg zijn, moet u ze niet weggooien maar inleveren als KCA.

Precautions**On safety**

- **FVM-9045QM/9042QM:** Operate the unit on 100 - 240 V AC or 12 V DC. For the AC operation, use only the supplied AC power cord or the AC power adaptor recommended (not supplied). Do not use any other type.
For the battery operation, use only the NP-1B battery pack and BP-L60A/L90A with DC-L10 (not supplied). Do not use any other batteries.
- **FVM-9040ME:** Operate the unit only on 100 - 240 V AC. Use only the supplied AC power cord. Do not use any other type.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it further.
- Unplug the unit from the wall outlet if it is not to be used for several days.
- To disconnect the AC power cord, pull it out by the plug. Never pull the cord itself.

On installation

- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the unit near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Keep the unit away from a loudspeaker or motor, as the picture may be affected.

On cleaning

Clean the unit with a slightly dampened soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzine as they might damage the finish of the cabinet.
As a safety precaution, unplug the unit before cleaning it.

On repacking

Retain the original carton and packing materials for safe transport of this unit in the future.

If you have any questions about this unit, contact your authorized Sony dealer.

ATTENTION – When the product is installed in a rack:

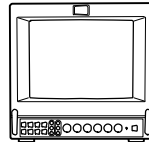
- Elevated operating ambient temperature**
If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature of 0 to +35°C (32 to 95°F) (Tmra).
- Reduced air flow**
Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- Mechanical loading**
Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- Circuit overloading**
Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- Reliable earthing**
Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).
- Gap keeping**
The upper and lower gaps of rack-mounted equipment should be least 44 mm (1 3/4 inches).

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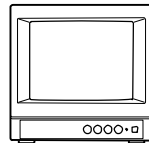
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This instruction manual covers the PVM-9045QM, PVM-9042QM and PVM-9040ME. The differences among the models are clearly described in the text.

PVM-9045QM/9042QM



PVM-9040ME



Features

Four colour systems available (PVM-9045QM/9042QM only)

The monitor can display PAL, SECAM, NTSC and NTSC443¹⁾ signals. The appropriate colour system is selected automatically.

HR (High Resolution) Trinitron^{®2)} picture tube (PVM-9045QM)

The HR Trinitron picture tube (0.25 mm aperture grill pitch) provides a high resolution picture. Horizontal resolution is more than 450 TV lines at the center of the picture.

Trinitron picture tube (PVM-9042QM/9040ME)

The Trinitron picture tube (0.5mm aperture grill pitch) provides a high resolution picture. Horizontal resolution is more than 250 TV lines at the center of the picture.

Beam current feedback circuit

The built-in beam current feedback circuit assures stable white balance.

Multiple input signals (PVM-9045QM/9042QM only)

In addition to the composite video signals and the Y/C signals, analog RGB signals and component signals can be input.

External sync input (PVM-9045QM/9042QM only)

When the EXT SYNC button is pressed, the monitor can be operated on the sync signal fed through an external sync connector.

Blue only picture (PVM-9045QM/9042QM only)

Black and white apparent picture consisting from only the blue signal will be displayed. This facilitates the chroma adjustment, and the observation of the video noise.

16:9 selector (PVM-9045QM/9042QM only)

The monitor can display the 16:9 signal with the correct ratio of width and height, compressing the picture vertically.

Under scan mode (PVM-9045QM/9042QM only)

The monitor can display signals that are scanned outside the normal screen so you can monitor the whole image.

Audio circuit and built-in speaker

A speaker (0.5 W, monaural) is built into the monitor for sound monitoring.

Automatic/Manual DEGAUSS

The screen is automatically demagnetized when the monitor is turned on. Manual degauss is also available for PVM-9045QM/9042QM by pressing the DEGAUSS button.

Automatic termination

(only connectors marked $\sim\vee\sim$)

The Y/C, VIDEO IN and EXT SYNC IN connectors are terminated at 75 ohms inside, when no cable is connected to the loop-through output connectors.

When a cable is connected to an output connector, the 75-ohm termination is automatically released.

EIA standard 19-inch rack mounting

By using an MB-507 mounting bracket (not supplied), the monitor can be mounted in an EIA standard 19-inch rack. For details on mounting, see the instruction manual of the MB-507.

Varied power sources

In addition to AC power, you can use battery pack or external DC 12 V power. The monitor can operate with one or two Sony NP-1B* battery packs. If you use the DC-L10* battery adaptor, the monitor can operate with a Sony BP-L60A/L90A* lithium ion battery pack.

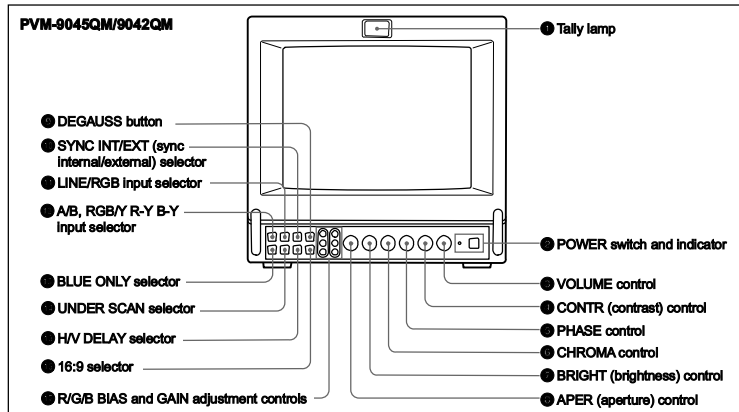
* The NP-1B battery pack, DC-L10 battery adaptor and BP-L60A/L90A battery pack are not supplied.

1) An NTSC 4.43 signal is used for playing back NTSC-recorded video cassettes with a video tape recorder/player especially designed for use with this system.

2) Trinitron is a trademark of Sony Corporation.

Location and Function of Parts and Controls

Front



① Tally lamp

This indicator lights up. The tally control connection is needed.

For the pin assignment, see "Specifications" on page 12 (GB).

② POWER switch and indicator

Depress to turn the monitor on. The indicator will light up in green. The POWER indicator also functions as the battery indicator. When the internal battery becomes weak or the power supplied through the DC 12 V IN jack decreases, the indicator flashes.

③ VOLUME control

Turn this control clockwise or counterclockwise to obtain the desired volume.

④ CONTR (contrast) control

Turn clockwise to make the contrast stronger and counterclockwise to make it weaker.

⑤ PHASE control

This control is effective only for the NTSC and NTSC4.43 colour systems. Turn clockwise to make the skin tones greenish and counterclockwise to make them purplish.

⑥ CHROMA control

Turn clockwise to make the colour intensity stronger and counterclockwise to make it weaker.

⑦ BRIGHT (brightness) control

Turn clockwise for more brightness and counterclockwise for less.

⑧ APER (aperture) control

Turn clockwise for more sharpness and counterclockwise for less.

Notes

- The PHASE, CHROMA and APER control settings have no effect on an analog RGB signal.
- The PHASE control has no effect on component signals.
- The PHASE control setting is effective only for the NTSC system.

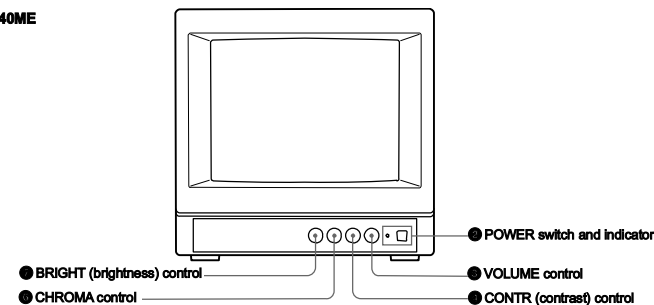
⑨ DEGAUSS button

Press this button momentarily. The screen will be demagnetized.

Note

If you press the DEGAUSS button again too soon, the color shades may be uneven.

PVM-9040ME



① SYNC INT/EXT (sync internal/external) selector
Keep this button released (INT) to operate the monitor on the sync signal from the displayed composite video signal.

Depress this button (EXT) to operate the monitor on an external sync signal fed through the EXT SYNC connector on the rear panel.

② LINE/RGB input selector

Select the programme to be monitored. Keep this button released (LINE) for a signal fed through the LINE A or LINE B connectors. Depress this button (RGB) for a signal fed through the RGB connectors.

③ A/B, RGB/Y R-Y B-Y input selector

When the LINE/RGB input selector is set to LINE, keep this button released (A) for a signal fed through the LINE A connectors. Press this button (B) to monitor the signals from the LINE B connectors.

When the LINE/RGB input selector is set to RGB, select the RGB signal or the component signal which is fed through the RGB input connectors. Keep this button released (RGB) for the RGB signal. Press this button (Y R-Y B-Y) to monitor the component signals.

④ BLUE ONLY selector

Depress this button to turn off the red and green signals. A blue signal is displayed as an apparent monochrome picture on the screen. This facilitates "chroma" control adjustments and the observation of video noise.

⑤ UNDER SCAN selector

Depress this button for underscanning. The display size is reduced by approximately 3% so that four corners of the picture are visible.

⑥ H/V DELAY selector

Depress this button to observe the horizontal and vertical sync signals at the same time. The horizontal sync signal is displayed in the left quarter of the screen; the vertical sync signal is displayed near the center of the screen.

⑦ 16:9 selector

Press this selector to monitor the signals of 16:9 picture. Pressing the UNDER SCAN selector ⑤ in 16:9 mode displays the whole 16:9 picture up to the four corners.

⑧ R/G/B BIAS and GAIN adjustment controls

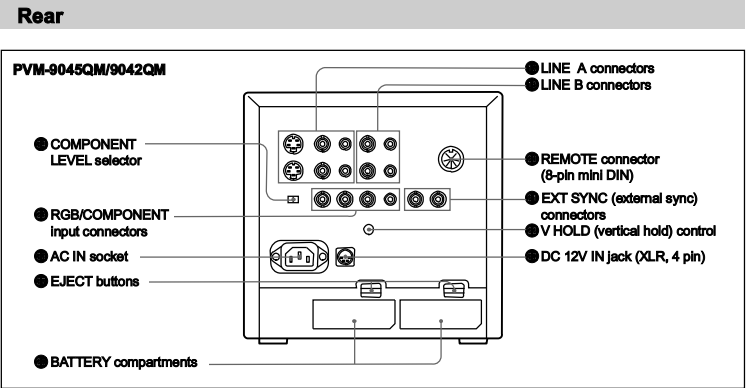
Used for white balance fine adjustment.

BIAS and GAIN controls are provided for the R (red), G (green) and B (blue) screens.

BIAS: Adjust the white balance and brightness of the screen at the lowlight.

GAIN: Adjust the white balance and brightness of the screen at the highlight.

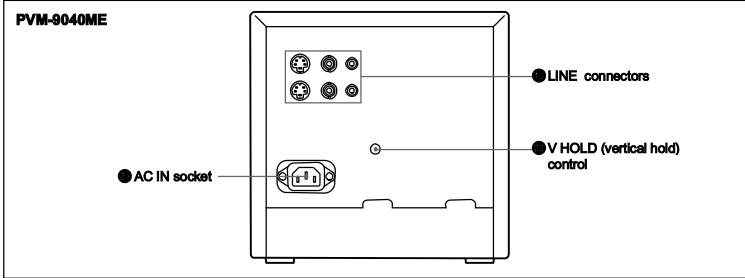
Location and Function of Parts and Controls



- ① **LINE A connectors (PVM-9045QM/9042QM)**
- ② **LINE connectors (PVM-9040ME)**
- Y/C IN (4-pin mini DIN):** Connect to the Y/C separate output of a video camera, VCR or other video equipment.
- Y/C OUT (4-pin mini DIN):** Loop-through output of the Y/C IN connector. Connect to the Y/C separate input of a VCR or another monitor.
- VIDEO IN (BNC):** Connect to the video output of a video camera, VCR or other video equipment.
- VIDEO OUT (BNC):** Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.
- AUDIO IN (phono jack):** Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).
- AUDIO OUT (phono jack):** Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

Note
The Y/C IN connector has a priority over the VIDEO IN connector.
When a plug is connected to the Y/C IN connector, the VIDEO IN connector is automatically disconnected.

- Note**
(PVM-9045QM/9042QM only)
To monitor the signal fed through these connectors, keep the LINE/RGB selector and the A/B, RGB/Y R-Y B-Y selector on the front panel released (LINE and A).
- ③ **LINE B connectors**
To monitor the signal fed through these connectors, keep the LINE/RGB selector released (LINE) and depress the A/B, RGB/Y R-Y B-Y selector on the front panel (B).
 - VIDEO IN (BNC):** Connect to the video output of a video camera, VCR or other video equipment.
 - VIDEO OUT (BNC):** Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.
 - AUDIO IN (phono jack):** Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).
 - AUDIO OUT (phono jack):** Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.



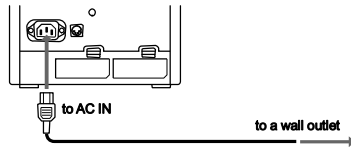
- ④ **REMOTE connector (8-pin mini DIN)**
Connect to the tally output of a control console, special-effect generator, etc. The tally lamp on the front panel will be turned on and off by the connected equipment. This connector can be used for connecting a remote controller.
For the pin assignment of this connector, see "Specifications" on page 12 (GB).
- ⑤ **EXT SYNC (external sync) connectors IN (BNC):** When this monitor operates on an external sync signal, connect the reference signal from a sync generator to this connector. In this case, depress the SYNC INT/EXT selector on the front panel (EXT).
- OUT (BNC):** Loop-through output of the EXT SYNC IN connector. Connect to the external sync input of video equipment to be synchronized with this monitor.
- ⑥ **V HOLD (vertical hold) control**
Turn to stabilize the picture if it rolls vertically.
- ⑦ **DC 12V IN jack (XLR, 4 pin)**
Connect the Sony battery adaptor DC-L10 (not supplied).
- ⑧ **COMPONENT LEVEL selector**
Select the component level from among two modes.
N10/SMPTE: for 100/0/100/0 signal
BETA 0: for 100/0/75/0 signal

- ⑨ **RGB/COMPONENT input connectors R/R-Y, G/Y, B/B-Y (BNC), AUDIO (phono):**
To monitor a signal fed through these connectors, depress the LINE/RGB selector on the front panel (RGB). When the SYNC INT/EXT selector on the front panel is released (INT), the monitor operates on the sync signal from the G/Y channel.
To monitor the analog RGB signal
Connect to the analog RGB signal outputs of a video camera. Keep the A/B, RGB/Y R-Y B-Y selector on the front panel released (RGB).
- To monitor the component signal**
Connect to the R-Y/Y/B-Y component signal outputs of a Sony BetaCam video camera. Depress the A/B, RGB/Y R-Y B-Y selector on the front panel (Y R-Y B-Y).
- ⑩ **AC IN socket**
Connect the supplied AC power cord to this socket and to a wall outlet.
- ⑪ **EJECT buttons**
Press the EJECT button upwards to remove the battery pack.
- ⑫ **BATTERY compartments**
Insert the NP-1B battery pack (not supplied).

Power Sources

House Current (for all models)

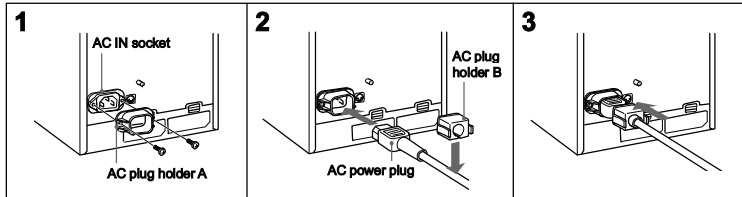
Connect the supplied AC power cord to the AC IN socket and to a wall outlet.



For the PVM-9045QM/9042QM

When the AC power cord is plugged into the AC IN socket, the battery pack (if installed) or the DC 12 V IN jack (if connected) is automatically disconnected.

To connect an AC power cord securely with AC plug holders.



1 Remove the AC IN socket screws and then use them to attach the AC plug holder A (supplied) to the AC IN socket.

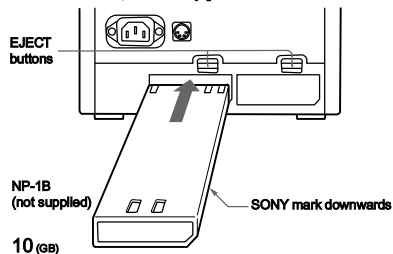
2 Plug the power cord to the AC IN socket. Then, attach the supplied AC plug holder B on top of the AC power cord.

3 Slide AC plug holder B over the cord until it locks.

To remove the AC power cord
Pull out AC plug holder B by squeezing the left and right sides.

Rechargeable Battery (PVM-9045QM/9042QM only)

The monitor can operate with one or two battery packs. For extended use, two battery packs are recommended.



To remove the battery pack, press the EJECT button upwards.

For charging, use the BC-1WDCE for the NP-1B.

Note

Make sure you disconnect the cables connected to the connectors (AC IN, DC 12 V IN) at the rear of the monitor. Otherwise, the monitor cannot operate on the battery pack(s).

Specifications

Video signal

Colour system	PVM-9045QM/9042QM: PAL, SECAM, NTSC, NTSC443 PVM-9040ME: PAL, SECAM
Resolution	PVM-9045QM: 450 TV lines PVM-9042QM/9040ME: 250 TV lines
Aperture correction	-4.0 dB to +6.0 dB (at 3.0 MHz)
Frequency response	6.0 MHz (-3.0 dB)
Synchronization	AFC time constant 1.0 msec.

Picture performance

Normal scan	6% over scan of CRT effective screen area
Underscan	3% underscan of CRT effective screen area
H. linearity	Less than 5.0% (typical)
V. linearity	Less than 5.0% (typical)
Convergence	Central area: 0.43 mm (typical) Peripheral area: 0.53 mm (typical)
Raster size stability	H: 1.0%, V: 1.5%
High voltage regulation	3.0%
Colour temperature	D65

Inputs and Outputs

Connector	Model	PVM-9045QM PVM-9042QM	PVM-9040ME
LINE A	Y/C IN	yes	yes
	Y/C OUT	yes	yes
	VIDEO IN	yes	yes
	VIDEO OUT	yes	yes
	AUDIO IN	yes	yes
LINE B	VIDEO IN	yes	no
	VIDEO OUT	yes	no
	AUDIO IN	yes	no
	AUDIO OUT	yes	no
RGB/ COMPONENT	R/R-Y IN	yes	no
	G/Y IN	yes	no
	B/B-Y IN	yes	no
	AUDIO IN	yes	no
EXT SYNC	IN	yes	no
	OUT	yes	no
REMOTE		yes	no

Inputs

Y/C IN: 4-pin mini DIN connector
See the pin assignment on page 12 (GB).
VIDEO IN: BNC connector
1 Vp-p \pm 6 dB, sync negative
AUDIO IN: phono jack, -5 dBu^a, less than 47 kohms
R/R-Y, G/Y, B/B-Y: BNC connector
R, G, B channels: 0.7 Vp-p, \pm 6 dB Sync on green: 0.3 Vp-p, negative
R-Y, Y, B-Y channels: 0.7 Vp-p, \pm 6 dB (Standard colour bar signal of 100% chrominance)
EXT SYNC IN: BNC connector
Composite sync 4 Vp-p, \pm 6 dB, negative

Loop-through outputs

Y/C OUT: 4-pin mini DIN connector, 75 ohms terminated (75 ohms automatic termination)
VIDEO OUT: BNC connector, 75 ohms terminated (75 ohms automatic termination)
AUDIO OUT: phono jack
EXT SYNC OUT: BNC connector, 75 ohms terminated
Output level: 0.5W
REMOTE: 8-pin mini DIN connector (75 ohms automatic termination)
See the pin assignment on page 12 (GB).

Speaker output

Remote input

^a) 0 dBu = 0.775 V_{r.m.s.}

General

Power consumption & requirements

PVM-9045QM/9042QM:
0.7 to 0.4A 43W at 100 to 240V AC operation
3.7A 40W at 12 V DC operation
PVM-9040ME:
0.7 to 0.4A 39W at 100 to 240V AC operation

Operating conditions

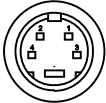
Temperature 0 to +35°C (32 to 95°F)
Humidity 0 to 90% (no condensation)
Pressure 700 to 1060 hPa

Specifications

Transport and storage conditions	
Temperature	-10 to +40°C (14 to 104°F)
Humidity	0 to 90%
Pressure	700 to 1060 hPa
Dimensions	Approx. 217 x 217 x 352.5 mm (w/h/d) (8 5/8 x 8 5/8 x 14 inches) not incl. projecting parts and controls
Mass	Approx. 8.2 kg (18 lb 1 oz) not incl. battery packs
Accessory supplied	AC power cord (1) Cable with an 8-pin connector (1) (PVM-9045QM/9042QM only) AC plug holders (1 set) Tally plate (1) (PVM-9045QM/ 9042QM only)

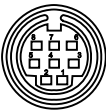
Design and specifications are subject to change
without notice.

Pin Assignment
Y/C IN connector (4-pin mini DIN)



Pin No.	Signal	Description
1	Y-Input	1 Vp-p, sync negative, 75 ohms
2	CHROMA sub-carrier-Input	300 mVp-p (PAL), burst Delay time between Y and C: within 0 ±100 nsec., 75 ohms
3	GND for Y-Input	GND
4	GND for CHROMA-Input	GND

REMOTE connector (8-pin mini DIN)
(PVM-9045QM/9042QM only)



Pin No.	Signal
1	16:9
2	H/V delay
3	GND
4	EXT SYNC
5	Tally
6	Underscan
7	A/B or RGB/Y R-Y B-Y
8	LINE/RGB

Notes

- For remote control, connect the pin of the desired function to pin 3 (GND).
- For remote control, set the front button to OFF (the switch is out).

SONY®

3-985-341-11 (1)

Trinitron® Color Video Monitor

Operating Instructions

US



PVM-9045PM

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English

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

Dangerously high voltages are present inside the unit. Do not open the cabinet. Refer servicing to qualified personnel only.

THIS APPARATUS MUST BE EARTHED

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

For the customers in the USA

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

2 (US)

In the event of a malfunction or when maintenance is necessary, consult an authorized Sony dealer.

Ensure that your equipment is connected correctly. If you are in any doubt consult a qualified electrician.

CAUTION:

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Precautions**On safety**

- **PVM-9045PM:** Operate the unit on 120 V AC or 12 V DC. For the AC operation, use only the supplied AC power cord or the AC power adaptor recommended (not supplied). Do not use any other type. For the battery operation, use only the NP-1B battery pack and BP-L60A/L90A with DC-L10 (not supplied). Do not use any other batteries.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it further.
- Unplug the unit from the wall outlet if it is not to be used for several days.
- To disconnect the AC power cord, pull it out by the plug. Never pull the cord itself.

On installation

- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the unit near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Keep the unit away from a loudspeaker or motor, as the picture may be affected.

On cleaning

Clean the unit with a slightly dampened soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzine as they might damage the finish of the cabinet. As a safety precaution, unplug the unit before cleaning it.

On repacking

Retain the original carton and packing materials for safe transport of this unit in the future.

If you have any questions about this unit, contact your authorized Sony dealer.

ATTENTION – When the product is installed in a rack:

- Elevated operating ambient temperature**
If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature of 0 to +35°C (32 to 95°F) (Tmra).
- Reduced air flow**
Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- Mechanical loading**
Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- Circuit overloading**
Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- Reliable earthing**
Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).

3 (US)

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Features

PAL-M and NTSC color systems available
The monitor can display PAL-M, NTSC signals. The appropriate color system is selected automatically.

HR (High Resolution) Trinitron®¹⁾ picture tube
The HR Trinitron picture tube (0.25 mm aperture grill pitch) provides a high resolution picture. Horizontal resolution is more than 450 TV lines at the center of the picture.

Beam current feedback circuit
The built-in beam current feedback circuit assures stable white balance.

Comb filter
When NTSC video signals are received, a comb filter activates to increase the resolution, resulting fine picture detail without color spill or color noise.

Multiple input signals
In addition to the composite video signals and the Y/C signals, analog RGB signals and component signals can be input.

External sync input
When the EXT SYNC button is pressed, the monitor can be operated on the sync signal fed through an external sync connector.

Blue only picture
Black and white apparent picture consisting from only the blue signal will be displayed. This facilitates the "chroma" and "phase" adjustment, and the observation of the video noise.

16:9 selector
The monitor can display the 16:9 signal with the correct ratio of width and height, compressing the picture vertically.

Under scan mode
The monitor can display signals that are scanned outside the normal screen so you can monitor the whole image.

Audio circuit and built-in speaker
A speaker (0.5 W, monaural) is built into the monitor for sound monitoring.

Automatic/Manual DEGAUSS
The screen is automatically demagnetized when the monitor is turned on. Manual degauss is also available by pressing the DEGAUSS button.

Automatic termination
(only connectors marked √√)
The Y/C, VIDEO IN and EXT SYNC IN connectors are terminated at 75 ohms inside, when no cable is connected to the loop-through output connectors. When a cable is connected to an output connector, the 75-ohm termination is automatically released.

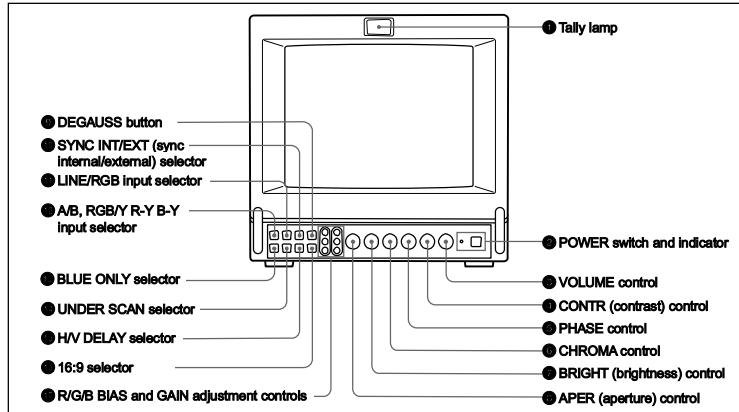
EIA standard 19-inch rack mounting
By using an MB-507 mounting bracket (not supplied), the monitor can be mounted in an EIA standard 19-inch rack. For details on mounting, see the instruction manual of the MB-507.

Varied power sources
In addition to AC power, you can use battery pack or external DC 12 V power. The monitor can operate with one or two Sony NP-1B* battery packs. If you use the DC-L10* battery adaptor, the monitor can operate with a Sony BP-L60A/L90A* lithium ion battery pack.

* The NP-1B battery pack, DC-L10 battery adaptor and BP-L60A/L90A battery pack are not supplied.

Location and Function of Parts and Controls

Front



1 Tally lamp

This indicator lights up. The tally control connection is needed.

For the pin assignment, see "Specifications" on page 12 (US).

2 POWER switch and indicator

Depress to turn the monitor on. The indicator will light up in green.

The POWER indicator also functions as the battery indicator. When the internal battery becomes weak or the power supplied through the DC 12 V IN jack decreases, the indicator flashes.

3 VOLUME control

Turn this control clockwise or counterclockwise to obtain the desired volume.

4 CONTR (contrast) control

Turn clockwise to make the contrast stronger and counterclockwise to make it weaker.

5 PHASE control

This control is effective only for the NTSC and NTSC4.43 color systems. Turn clockwise to make the skin tones greenish and counterclockwise to make them purplish.

6 (US)

6 CHROMA control

Turn clockwise to make the colour intensity stronger and counterclockwise to make it weaker.

7 BRIGHT (brightness) control

Turn clockwise for more brightness and counterclockwise for less.

8 APER (aperture) control

Turn clockwise for more sharpness and counterclockwise for less.

Notes

- The PHASE, CHROMA and APER control settings have no effect on an analog RGB signal.
- The PHASE control has no effect on component signals.
- The PHASE control setting is effective only for the NTSC system.

9 DEGAUSS button

Press this button momentarily. The screen will be demagnetized.

Note

If you press the DEGAUSS button again too soon, the color shades may be uneven.

10 SYNC INT/EXT (sync internal/external) selector

Keep this button released (INT) to operate the monitor on the sync signal from the displayed composite video signal.

Depress this button (EXT) to operate the monitor on an external sync signal fed through the EXT SYNC connector on the rear panel.

11 LINE/RGB input selector

Select the programme to be monitored. Keep this button released (LINE) for a signal fed through the LINE A or LINE B connectors. Depress this button (RGB) for a signal fed through the RGB connectors.

12 A/B, RGB/Y R-Y B-Y input selector

When the LINE/RGB input selector is set to LINE, keep this button released (A) for a signal fed through the LINE A connectors. Press this button (B) to monitor the signals from the LINE B connector.

When the LINE/RGB input selector is set to RGB, select the RGB signal or the component signal which is fed through the RGB input connectors. Keep this button released (RGB) for the RGB signal. Press this button (Y R-Y B-Y) to monitor the component signals.

13 BLUE ONLY selector

Depress this button to turn off the red and green signals. A blue signal is displayed as an apparent monochrome picture on the screen. This facilitates "chroma" and "phase" control adjustments and the observation of video noise.

Note

The PHASE control adjustments is effective only for the NTSC system.

14 UNDER SCAN selector

Depress this button for underscanning. The display size is reduced by approximately 3% so that four corners of the picture are visible.

15 H/V DELAY selector

Depress this button to observe the horizontal and vertical sync signals at the same time. The horizontal sync signal is displayed in the left quarter of the screen; the vertical sync signal is displayed near the center of the screen.

16 16:9 selector

Press this selector to monitor the signals of 16:9 picture.

Pressing the UNDER SCAN selector 14 in 16:9 mode displays the whole 16:9 picture up to the four corners.

17 R/G/B BIAS and GAIN adjustment controls

Used for white balance fine adjustment.

BIAS and GAIN controls are provided for the R (red), G (green) and B (blue) screens.

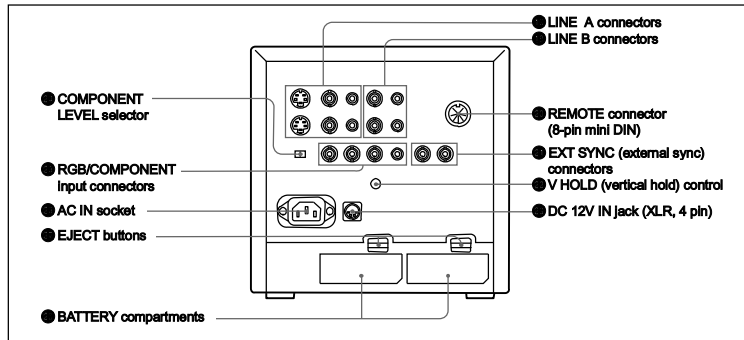
BIAS: Adjust the white balance and brightness of the screen at the lowlight.

GAIN: Adjust the white balance and brightness of the screen at the highlight.

7 (US)

Location and Function of Parts and Controls

Rear



● LINE A connectors

Y/C IN (4-pin mini DIN): Connect to the Y/C separate output of a video camera, VCR or other video equipment.

Y/C OUT (4-pin mini DIN): Loop-through output of the Y/C IN connector. Connect to the Y/C separate input of a VCR or another monitor.

VIDEO IN (BNC): Connect to the video output of a video camera, VCR or other video equipment.

VIDEO OUT (BNC): Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.

AUDIO IN (phone jack): Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).

AUDIO OUT (phone jack): Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

Note

The Y/C IN connector has a priority over the VIDEO IN connector. When a plug is connected to the Y/C IN connector, the VIDEO IN connector is automatically disconnected.

To monitor the signal fed through these connectors, keep the LINE/RGB selector and the A/B, RGB/Y R-Y B-Y selector on the front panel released (LINE and A).

● LINE B connectors

To monitor the signal fed through these connectors, keep the LINE/RGB selector released (LINE) and depress the A/B, RGB/Y R-Y B-Y selector on the front panel (B).

VIDEO IN (BNC): Connect to the video output of a video camera, VCR or other video equipment.

VIDEO OUT (BNC): Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.

AUDIO IN (phone jack): Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).

AUDIO OUT (phone jack): Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

● REMOTE connector (8-pin mini DIN)

Connect to the tally output of a control console, special-effect generator, etc. The tally lamp on the front panel will be turned on and off by the connected equipment. This connector can be used for connecting a remote controller.

For the pin assignment of this connector, see "Specifications" on page 12 (US).

● EXT SYNC (external sync) connectors

IN (BNC): When this monitor operates on an external sync signal, connect the reference signal from a sync generator to this connector. In this case, depress the SYNC INT/EXT selector on the front panel (EXT).

OUT (BNC): Loop-through output of the EXT SYNC IN connector. Connect to the external sync input of video equipment to be synchronized with this monitor.

● V HOLD (vertical hold) control

Turn to stabilize the picture if it rolls vertically.

● DC 12V IN jack (XLR, 4 pin)

Connect the Sony battery adaptor DC-L10 (not supplied).

● COMPONENT LEVEL selector

Select the component level from among two modes.

N10/SMPTE: for 100/0/100/0 signal

BETA 0: for 100/0/75/0 signal

● RGB/COMPONENT input connectors

R/R-Y, G/Y, B/B-Y (BNC), AUDIO (phone):

To monitor a signal fed through these connectors, depress the LINE/RGB selector on the front panel (RGB). When the SYNC INT/EXT selector on the front panel is released (INT), the monitor operates on the sync signal from the G/Y channel.

To monitor the analog RGB signal

Connect to the analog RGB signal outputs of a video camera. Keep the A/B, RGB/Y R-Y B-Y selector on the front panel released (RGB).

To monitor the component signal

Connect to the R-Y/Y/B-Y component signal outputs of a Sony BetaCam video camera. Depress the A/B, RGB/Y R-Y B-Y selector on the front panel (Y R-Y B-Y).

● AC IN socket

Connect the supplied AC power cord to this socket and to a wall outlet.

● EJECT buttons

Press the EJECT button upwards to remove the battery pack.

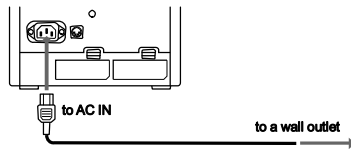
● BATTERY compartments

Insert the NP-1B battery pack (not supplied).

Power Sources

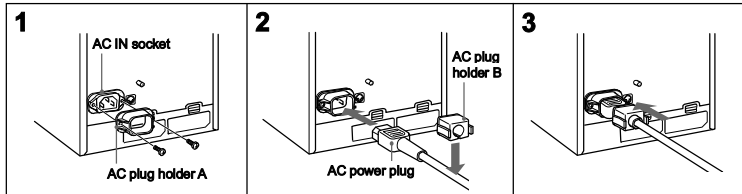
House Current (for all models)

Connect the supplied AC power cord to the AC IN socket and to a wall outlet.



When the AC power cord is plugged into the AC IN socket, the battery pack (if installed) or the AC power adaptor (if connected) is automatically disconnected.

To connect an AC power cord securely with AC plug holders.



1 Remove the AC IN socket screws and then use them to attach the AC plug holder A (supplied) to the AC IN socket.

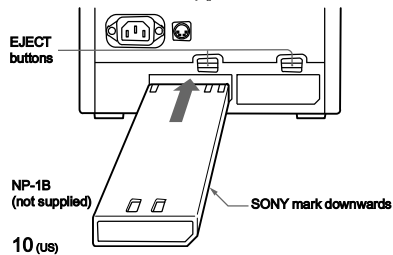
2 Plug the power cord to the AC IN socket. Then, attach the supplied AC plug holder B on top of the AC power cord.

3 Slide AC plug holder B over the cord until it locks.

To remove the AC power cord
Pull out AC plug holder B by squeezing the left and right sides.

Rechargeable Battery

The monitor can operate with one or two battery packs. For extended use, two battery packs are recommended.



To remove the battery pack, press the EJECT button upwards.

For charging, use the BC-1WD for the NP-1B.

Note

Make sure you disconnect the cables connected to the connectors (AC IN, DC 12 V IN) at the rear of the monitor. Otherwise, the monitor cannot operate on the battery pack(s).

Specifications

Video signal

Color system	PAL-M, NTSC
Resolution	450 TV lines
Aperture correction	-4.0 dB to +6.0 dB (at 3.0 MHz)
Frequency response	6.0 MHz (-3 dB) at all inputs
Synchronization	AFC time constant 1.0 msec.

Picture performance

Normal scan	6% over scan of CRT effective screen area
Underscan	3% underscan of CRT effective screen area
H. linearity	Less than 5.0% (typical)
V. linearity	Less than 5.0% (typical)
Convergence	Central area: 0.43 mm (typical) Peripheral area: 0.53 mm (typical)
Raster size stability	H: 1.0%, V: 1.5%
High voltage regulation	3.0%
Color temperature	D65

Inputs and Outputs

Inputs	Y/C IN: 4-pin mini DIN connector See the pin assignment on page 12 (US). VIDEO IN: BNC connector 1 Vp-p \pm 6 dB, sync negative AUDIO IN: phono jack, -5 dBu ^a , less than 47 kohms R/R-Y, G/Y, B/B-Y: BNC connector R, G, B channels: 0.7 Vp-p, \pm 6 dB Sync on green: 0.3 Vp-p, negative, R-Y, Y, B-Y channels: 0.7 Vp-p, \pm 6 dB (Standard colour bar signal of 75% chrominance) EXT SYNC IN: BNC connector Composite sync 4 Vp-p, \pm 6 dB, negative
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Loop-through outputs

Y/C OUT: 4-pin mini DIN connector, 75 ohms terminated (75 ohms automatic termination)
VIDEO OUT: BNC connector, 75 ohms terminated (75 ohms automatic termination)
AUDIO OUT: phono jack
EXT SYNC OUT: BNC connector, 75 ohms terminated
Output level 0.5 W
REMOTE: 8-pin mini DIN connector (75 ohms automatic termination)
See the pin assignment on page 12 (US).

^a) 0 dBu = 0.775 V_{r.m.s.}

General

Power consumption & requirements	0.6 A 45 W MAX at 120 V AC operation 3.7 A 38 W at 12 V DC operation
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Operating conditions

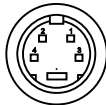
Temperature	0 to +35°C (32 to 95°F)
Humidity	0 to 90% (no condensation)
Pressure	700 to 1060 hPa
Transport and storage conditions	Temperature -10 to +40°C (14 to 104°F) Humidity 0 to 90% Pressure 700 to 1060 hPa
Dimensions	Approx. 217 x 217 x 352.5 mm (w/h/d) (8 1/8 x 8 1/8 x 14 inches) not incl. projecting parts and controls
Mass	Approx. 8.2 kg (18 lb 1 oz) not incl. battery packs
Accessory supplied	AC power cord (1) Cable with an 8-pin connector (1) AC plug holders (1 set) Tally plate (1)

Design and specifications are subject to change without notice.

Specifications

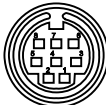
Pin Assignment

Y/C IN connector (4-pin mini DIN)



Pin No.	Signal	Description
1	Y-input	1 Vp-p, sync negative, 75 ohms
2	CHROMA sub-carrier-input	300 mVp-p (PAL-M), 286 mVp-p (NTSC), burst Delay time between Y and C: within 0 ±100 nsec, 75 ohms
3	GND for Y-input	GND
4	GND for CHROMA-input	GND

REMOTE connector (8-pin mini DIN)
(PVM-8045Q/8042Q only)



Pin No.	Signal
1	16:9
2	H/V delay
3	GND
4	EXT SYNC
5	Tally
6	Underscan
7	A/B or RGB/Y R-Y B-Y
8	LINE/RGB

Notes

- For remote control, connect the pin of the desired function to pin 3 (GND).
- For remote control, set the front button to OFF (the switch is out).

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